Amendment in Response to August 18, 2006 Office Action

Appln. Serial No. 10/532,909 Filed: December 16, 2005 Docket No.: 8932-1178-999

CAM: 232200-999296

## Amendments to the Claims:

This following listing of claims will replace all prior versions and listings of claims in the application.

## Listing of claims:

Claims 1 - 18 (Canceled)

- 19. (New) A device for the treatment of femoral fractures comprising:
  - an intramedullary pin having a first longitudinal axis, a proximal portion, a distal portion, and at least one transverse opening through the proximal portion of the pin, the at least one transverse opening forming an oblique angle with the first longitudinal axis and having a non-circular cross-section;
  - a bone fixation element having a second longitudinal axis, a first end, a second end, and a shaft, the first end configured and dimensioned to engage bone in the femoral head,
  - a sliding sleeve having a central bore, an interior surface profile, and an exterior surface profile, the central bore and interior surface profile configured to receive the shaft of the bone fixation element while permitting free rotation of the bone fixation element relative to the sleeve, and the exterior surface profile having at least a portion with a non-circular cross-section adapted to mate with the non-circular cross-section of the transverse opening, thereby preventing rotation of the sleeve with respect to the intramedullary pin; and
  - a locking mechanism configured and adapted to selectively lock rotation of the bone fixation element relative to the sleeve when in a first position and permit free rotation of the bone fixation element relative to the sleeve when in a second position.
- 20. (New) The device of claim 19, wherein the bone fixation element, sliding sleeve and locking mechanism are adapted for insertion through the transverse opening in the pin as a single preassembled unit.

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21. (New) The device of claim 19, wherein the second end of the bone fixation element

includes a longitudinal bore.

22. (New) The device of claim 21, wherein the longitudinal bore at the second end of the

bone fixation element is at least partially threaded.

23. (New) The device of claim 22, wherein the locking mechanism is a fixing screw

having a screw head with a diameter D and a screw shank with a diameter d having an

outside thread, where D > d.

24. (New) The device of claim 23, wherein the outside thread of the fixing screw shank

corresponds to the threaded bore of the bone fixation element, and progressive tightening of

the fixing screw within the threaded bore rotationally locks the bone fixation element with the

sliding sleeve, thereby preventing rotation of the bone fixation element relative to the sliding

sleeve.

25. (New) The device of claim 19, wherein the bone fixation element is axially fixed

relative to the sliding sleeve.

26. (New) The device of claim 25, wherein the shaft of the bone fixation element includes

a first annular groove and the internal surface profile of the sliding sleeve includes a second

annular groove, and a ring element engages both the first and second annular grooves to

prevent axial displacement of the shaft relative to the sliding sleeve.

27. (New) The device of claim 19, wherein a rear end of the sliding sleeve extends a

distance x past the second end of the bone fixation element, where x is at least 0.01 mm.

(New) The device of claim 19, wherein the second end of the bone fixation element 28.

includes an externally threaded portion.

29. (New) The device of claim 28, wherein the locking mechanism is a nut with an

internal thread that corresponds to the externally threaded portion at the second end of the

bone fixation element.

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30. (New) The device of claim 19, wherein the first end of the bone fixation element

includes a helical blade.

31. (New) The device of claim 19, wherein the first end of the bone fixation element

includes a screw thread, a chisel, a pin, a T-section or a double T-section.

32. (New) The device of claim 19, wherein the first end of the bone fixation element

includes a plurality of helical blades.

(New) The device of claim 30, wherein the helical blade has a pitch of at least 50 mm. 33.

34. (New) The device of claim 19, wherein the locking mechanism is adapted to limit axial

displacement of the sliding sleeve relative to the intramedullary pin.

35. (New) The device of claim 19, wherein the bone fixation element is a screw.

(New) The device of claim 19, wherein the external surface profile of the sliding 36.

sleeve includes a longitudinal projection that mates with a longitudinal recess in the

transverse opening.

37. (New) A device for the treatment of femoral fractures comprising:

an intramedullary pin having a first longitudinal axis, a proximal portion, a distal

portion, and at least one transverse opening through the proximal portion of

the pin, the at least one transverse opening forming an oblique angle with the

central longitudinal axis and having a non-circular cross-section;

a cross-member configured for insertion through the transverse opening to engage

bone in the femoral head, the cross-member including:

a sliding sleeve having a central bore, a circular interior surface profile, and a

non-circular exterior surface profile, the exterior surface profile

adapted to mate with the non-circular cross-section of the transverse

opening, thereby preventing rotation of the sleeve with respect to the

intramedullary pin,

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a bone fixation element having a first end, a second end, and a shaft, the first

end configured and dimensioned to engage bone in the femoral head,

and the shaft configured and dimensioned for free rotation within the

central bore of the sliding sleeve, and

a locking mechanism configured and adapted to selectively lock rotation of the

bone fixing element relative to the sleeve when in a first position and

permit free rotation of the bone fixing element relative to the sleeve

when in a second position.

38. (New) The device of claim 37, wherein the cross-member is adapted for insertion

through the transverse opening in the pin as a single preassembled unit.

39. (New) The device of claim 37, wherein the first end of the bone fixation element

includes a helical blade.

40. (New) The device of claim 37, wherein the bone fixation element is a screw.

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